Reply to Office Action of May 4, 2005

Docket No.: 0505-1223P Art Unit 3682

Page 2 of 13 pages

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A chain tensioner provided with a tensioner arm relatively

slidably engaged with an outside on a loose side of a transmission chain without with an end

rockably supported by a fixed structure and coupling a driving sprocket and a driven sprocket

and a tensioner lifter supported by a fixed structure for pressing an end of the tensioner arm

on the loose side of the transmission chain, wherein the tensioner arm comprises:

an elastic band tensioner arm body curved toward the transmission chain, the

tensioner arm body being made of a spring steel plate; and

a flexible tensioner shoe for covering a front of the tensioner arm body and having a

chain guide groove to the front wherein the transmission chain is slidably fitted; and

a width of a middle in the longitudinal direction of the tensioner arm body is set to a

smaller value relative to a width of each end of the tensioner arm body so that a natural

oscillation frequency in the middle of the tensioner arm body is different from the natural

oscillation frequency at each of the ends of the tensioner arm body, thereby preventing

resonance of the tensioner arm body.

2. (Original) The chain tensioner according to claim 1, wherein an arc-shaped cut-

out is formed on both sides of the middle to set the width of the middle of the tensioner arm

body to a small value.

Birch, Stewart, Kolasch & Birch, LLP

Reply to Office Action of May 4, 2005

Docket No.: 0505-1223P Art Unit 3682

Page 3 of 13 pages

3. (Original) The chain tensioner according to claim 1, wherein cut-outs are provided

in said tensioner arm body that are staggered to be not in alignment on each side of said

tensioner arm body.

4. (Original) The chain tensioner according to claim 1, wherein cut-outs are provided

in said tensioner arm body that are alignment relative to each other on each side of said

tensioner arm body.

5. (Original) The chain tensioner according to claim 1, wherein gradually reduced

areas are provided in said tensioner arm body that are alignment relative to each other on

each side of said tensioner arm body.

6. (Original) The chain tensioner according to claim 1, wherein said tensioner arm

extends for a predetermined distance in engagement with the loose side of said transmission

chain for enhancing the oscillation absorption function of the transmission chain.

7. (Original) The chain tensioner according to claim 1, and further including a

control arm for engaging the tensioner arm for applying pressure from the tensioner lifter to

the tensioner arm.

Reply to Office Action of May 4, 2005

Docket No.: 0505-1223P Art Unit 3682

Page 4 of 13 pages

8. (Original) The chain tensioner according to claim 7, wherein said control arm is a

spring plate for applying a biasing force to the tensioner arm.

9. (Currently Amended) A chain tensioner provided with a tensioner arm rockably

supported by a fixed structure and relatively slidably engaged with an outside on a loose side

of a transmission chain coupling a driving sprocket and a driven sprocket and a tensioner

lifter supported by a fixed structure for pressing the end of the tensioner arm upon the loose

side of the transmission chain, wherein the tensioner arm comprises:

an elastic band tensioner arm body curved toward the transmission chain, the

tensioner arm body being made of a spring steel plate; and

a flexible tensioner shoe for covering a front of the tensioner arm body and being

provided with a chain guide groove to a front wherein the transmission chain is slidably

fitted; and

at least one hole formed in a middle in the longitudinal direction of the tensioner arm

body so that a natural oscillation frequency in the middle of the tensioner arm body is

different from the natural oscillation frequency at each end of the tensioner arm body,

thereby preventing resonance of the tensioner arm body.

10. (Original) The chain tensioner according to claim 9, wherein said tensioner arm

extends for a predetermined distance in engagement with the loose side of said transmission

chain for enhancing the oscillation absorption function of the transmission chain.

Birch, Stewart, Kolasch & Birch, LLP

11. (Original) The chain tensioner according to claim 9, and further including a control arm for engaging the tensioner arm for applying pressure from the tensioner lifter to the tensioner arm.

12. (Original) The chain tensioner according to claim 11, wherein said control arm is a spring plate for applying a biasing force to retain engagement with the tensioner arm.

13. (Currently Amended) A chain tensioner comprising:

a tensioner arm relatively slidably engaged with a loose side of a transmission member for coupling a driving sprocket and a driven sprocket; and

a tensioner lifter for pressing an end of the tensioner arm on the side of the transmission member;

said tensioner arm comprising:

an elastic band tensioner arm body curved toward the transmission member, the tensioner arm body being made of a spring steel plate; and

a flexible tensioner shoe for covering a front of the tensioner arm body and having a guide groove wherein the transmission member is slidably fitted; and

wherein a central portion in the longitudinal direction of the tensioner arm body has a smaller width relative to the width of each end of the arm body

Reply to Office Action of May 4, 2005

Docket No.: 0505-1223P Art Unit 3682

Page 6 of 13 pages

so that a natural oscillation frequency in the central portion of the tensioner

arm body is different from the natural oscillation frequency at each of the ends

of the tensioner arm body, thereby preventing resonance of the tensioner arm

body.

14. (Original) The chain tensioner according to claim 13, wherein an arc-shaped cut-

out is formed on both sides of the center to form the center of the tensioner arm body with a

smaller width.

15. (Original) The chain tensioner according to claim 13, wherein cut-outs are

provided in said tensioner arm body that are staggered to be not in alignment on each side of

said tensioner arm body.

16. (Original) The chain tensioner according to claim 13, wherein cut-outs are

provided in said tensioner arm body that are alignment relative to each other on each side of

said tensioner arm body.

17. (Original) The chain tensioner according to claim 13, wherein gradually reduced

areas are provided in said tensioner arm body that are alignment relative to each other on

each side of said tensioner arm body.

Birch, Stewart, Kolasch & Birch, LLP

Reply to Office Action of May 4, 2005

Docket No.: 0505-1223P Art Unit 3682

Page 7 of 13 pages

18. (Original) The chain tensioner according to claim 13, wherein said tensioner arm

extends for a predetermined distance in engagement with the loose side of said transmission

member for enhancing the oscillation absorption function of the transmission member.

19. (Original) The chain tensioner according to claim 13, and further including a

control arm for engaging the tensioner arm for applying pressure thereto.

20. (Original) The chain tensioner according to claim 19, wherein said control arm is

a spring plate for biasing the tensioner arm.